

25 MDA/MDMA METHODOLOGY	Page 1 of 2
<div>Division of Forensic Science</div> <div>CONTROLLED SUBSTANCES PROCEDURES MANUAL</div>	Amendment Designator:
	Effective Date: 9-December-2003
<div>25 MDA/MDMA METHODOLOGY</div> <div>25.1 Scheduling:</div> <ul style="list-style-type: none"> <li>Schedule I - 3,4-methylenedioxyamphetamine (MDA)</li> <li>Schedule I - 3,4-methylenedioxymethamphetamine (MDMA, Ecstasy)</li> <li>Schedule I - 3,4-methylenedioxy-N-ethylamphetamine (MDEA, Eve)</li> <li>Schedule I - 4-bromo-2,5-dimethoxyphenethylamine (2C-B, Nexus)</li> </ul> <div>25.2 Color Tests Results:</div> <div>25.2.1 The sulfuric acid series of color tests generally give intense colors that undergo vivid transitions with MDA and MDMA. These may all appear black with very concentrated samples.</div> <div>25.2.2 Marquis</div> <ul style="list-style-type: none"> <li>MDA/MDMA - dark violet → black</li> <li>Nexus – light green → green</li> </ul> <div>25.2.3 Meckes</div> <ul style="list-style-type: none"> <li>MDA/MDMA - green → dark blue/violet → black</li> <li>Nexus - yellow</li> </ul> <div>25.2.4 Froehdes</div> <ul style="list-style-type: none"> <li>MDA/MDMA - brown → dark blue/violet → black</li> <li>Nexus – yellow</li> </ul> <div>25.2.5 TBPEE</div> <ul style="list-style-type: none"> <li>MDA – purple</li> <li>MDMA – blue</li> <li>MDEA - blue</li> <li>Nexus – purple</li> </ul> <div>25.3 TLC:</div> <div>25.3.1 Baths: TLC1, TLC2, TLC3, TLC4 and TLC5 are recommended.</div> <div>25.3.2 Detection sprays</div> <ul style="list-style-type: none"> <li>Iodoplatinate, results may be enhanced by overspraying with Ceric Sulfate.</li> <li>Dragendorff</li> <li>Fluram visualizes MDA, Nexus and other primary amines.</li> </ul> <div>25.4 UV: MDA/MDMA - maximum at 234 nm and 285 nm in acid with associated minima.</div> <div>25.5 GC:</div> <div>25.5.1 Extraction of the sample may be necessary to get good chromatography.</div>	

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<p>25.5.2 Acetyl Derivative: The acetyl derivative of MDMA-type compounds is made by drawing up 1 µL of sample followed by 1 µL of acetic anhydride, separated by an air bubble. The acetyl derivative should have a longer retention time than the underivatized compound and may require a higher temperature than the underivatized compound.</p> <p><b>25.6 FTIR:</b></p> <p>25.6.1 Extraction from excipients may be necessary to obtain a good spectrum.</p> <p>25.6.2 GC-FTIR is a useful tool to differentiate MDMA-type compounds.</p> <p><b>25.7 MDMA Quantitation:</b></p> <p>25.7.1 See GC section 10 for general quantitation procedure.</p> <p>25.7.2 Reagents:</p> <ul style="list-style-type: none"> <li>• Methylene Chloride or Chloroform</li> <li>• Octadecane</li> <li>• MDMA HCl: (Alltech or USP)</li> </ul> <p>25.7.3 Internal Standard Solution:</p> <p>25.7.3.1 Prepare a sufficient volume to dilute the standard solutions and all samples.</p> <p>25.7.3.2 Prepare a 1 mg/mL solution of octadecane in methylene chloride or chloroform in the appropriate volumetric flask.</p> <p>25.7.4 MDMA Standard Solutions:</p> <p>25.7.4.1 Weigh ~ 20 mg of MDMA HCl and transfer to a 10 mL volumetric flask with internal standard solution. Dilute to mark with internal standard solution. This results in a solution of ~ 2.0 mg/mL MDMA in internal standard solution.</p> <p>25.7.4.2 Prepare a solution of another concentration within the linear range in the same manner to use as the check standard.</p> <p>25.7.5 Sample Preparation:</p> <p>25.7.5.1 If the salt form of the sample is unknown, convert MDMA HCl to free base by multiplying the weight of MDMA HCl by 0.841 (193.25 F.B./229.71 HCl).</p> <p>25.7.5.2 Weigh 10-40 mg of sample and transfer to a 10 mL volumetric flask with internal standard solution. Dilute to mark with internal standard solution.</p> <p>25.7.6 GC parameters:</p> <ul style="list-style-type: none"> <li>• Column: 15 m HP-1 or HP-5 capillary (0.25 mm i.d, 0.25 µm film thickness)</li> <li>• Oven temperature: 150 - 170°C</li> <li>• FID temperature : 270°C</li> </ul> <p>25.7.7 Octadecane comes out after MDMA.</p> <p style="text-align: right;">◆ End</p>	